

Trichomonas vaginalis by Amplified Detection

Test Highlights

- This is a qualitative nucleic acid amplification test (NAAT) for the detection of *T. vaginalis*.¹
- It is FDA-approved for the detection of *T. vaginalis* in endocervical and vaginal swab specimens, female urine specimens, and PreservCyt[®] liquid Pap specimens.¹
- Testing for trichomoniasis can be performed by microscopic examination, rapid antigen testing, culture, or nucleic acid-based testing (hybridization and amplification).
- Nucleic acid amplification tests (NAAT) have the highest sensitivity for detection of *T. vaginalis*.^{5–9}
- To achieve optimal sensitivity, specimens must be collected and transported with appropriate collection kits following the provided instructions.

Clinical Background

- Up to 50 percent of women with *T. vaginalis* infections have minimal or no symptoms.
- If symptomatic, *T. vaginalis* infections can cause vaginitis, urethritis, and cervicitis and may present with vaginal, malodorous discharge, dysuria, and vulvar irritation.
- Complications of *T. vaginalis* infections include premature rupture of membranes, preterm delivery, and low birth weight offspring.
- Infections with *T. vaginalis* may also facilitate transmission of HIV.⁴
- The proportion of asymptomatic infections in men may be even higher than in women.

Epidemiology

- Trichomoniasis is a sexually transmitted infection.
- More than 7 million new infections are estimated to occur in the United States per year.²
- The overall prevalence of *T. vaginalis* is approximately 3 percent but varies by age and ethnicity.³
- The number of new infections with *T. vaginalis* is higher in women age 30–50 than in women younger than 30.³
- *T. vaginalis* infections are more common in African-American women (prevalence ~13 percent).³

Indications for Ordering

- Testing for *T. vaginalis* is recommended in all women seeking care for vaginal discharge.⁴
- Screening for *T. vaginalis* may be indicated in women with high risk of infection (new or multiple partners, history of STDs, commercial sex, injection drug users).⁴
- Oral and rectal testing is not recommended for *T. vaginalis*.⁴
- This test should not be used to determine therapeutic failure or success since nucleic acid may persist following appropriate antimicrobial therapy.¹

Interpretation

Results should be interpreted in conjunction with other clinical data.

Limitations

- Sensitivity may be reduced with mucoid samples. To ensure proper endocervical sampling, excess mucus should be removed.¹
- The transport system does not permit microscopic assessment of specimen adequacy. Proper specimen collection techniques are necessary for optimal performance. Follow instructions of specimen collection kits.^{10–12}
- This test has not been validated for use with self-collected vaginal swab specimens.¹
- Performance on vaginal swab specimens from pregnant women has not been evaluated.¹

Methodology

Qualitative target amplification nucleic acid probe.

References

1. APTIMA[®] Trichomonas vaginalis assay [package insert]. San Diego, CA: Gen-Probe Inc; 2011.
2. National Prevention Information Network. STDs Today. <http://www.cdcnpi.org/scripts/std/std.asp> (accessed on November 7, 2011).
3. Sutton M, et al. The prevalence of *T. vaginalis* infection among reproductive-age women in the United States, 2001–2004. *Clin Infect Dis*. 2007;45(10):1319–26.
4. Centers for Disease Control and Prevention. STD Treatment Guidelines, 2010. <http://www.cdc.gov/std/treatment/2010/> (accessed on November 7, 2011).
5. Andrea SB, et al. Comparison of APTIMA *T. vaginalis* transcription-mediated amplification assay and BD Affirm VPIII for detection of *T. vaginalis* in symptomatic women: performance parameters and epidemiological implications. *J Clin Micro*. 2011;49(3):866–9.
6. Huppert J, et al. Rapid antigen testing compares favorably with transcription-mediated amplification assay for the detection of *Trichomonas vaginalis* in young women. *Clin Infect Dis*. 2007;45:194–8.

7. Hollman D, et al. Screening for *T. vaginalis* in high-risk adolescent females with a new transcription-mediated nucleic acid amplification test (NAAT): associations with ethnicity, symptoms, and prior and current STIs. *J Pediatr Adolesc Gynecol.* 2010;23:312–6.
8. Nye MB, et al. Comparison of APTIMAT. vaginalis transcription-mediated amplification to wet mount microscopy, culture, and polymerase chain reaction for diagnosis of trichomoniasis in men and women; *Am J Obstet Gynecol.* 2009;200(2):188.e1–7.
9. Caliendo AM, et al. Real-time PCR improves detection of *T. vaginalis* infection compared with culture using self-collected vaginal swabs. *Infect Dis Obstet Gynecol.* 2005;13(3):145–50.
10. Urine specimen collection kit [package insert]. San Diego, CA: Gen-Probe Inc; 2011.
11. Unisex swab specimen collection kit [package insert]. San Diego, CA: Gen-Probe Inc; 2011.
12. Vaginal swab specimen collection kit [package insert]. San Diego, CA: Gen-Probe Inc; 2011.

Test Information

2005506 *Trichomonas vaginalis* by Amplified Detection

For specific collection, transport, and testing information, refer to the ARUP website at www.aruplab.com.

For information on test selection, ordering, and interpretation, refer to ARUP Consult® at www.arupconsult.com.

AUTHOR

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